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Library E-Book Platforms Are Broken:

Let's Fix Them

Joelle Thomas

Galadriel Chilton

Abstract

E-books promise users convenience and accessibility, but library e-book platforms contain so many barriers to use and access that patrons often turn away in frustration. In addition, aggregators' e-book platforms often include intrusive, onerous digital rights management (DRM) restrictions. The traditional solution of DRM-free e-books are generally only available only in large and expensive publisher packages. One approach to solving these problems is an evidence-based selection of e-books program; it not only offers access to hundreds of DRM-free, unlimited simultaneous-user e-books that are integrated with similar e-journal content, but also includes an agreement that libraries will only purchase titles with the highest use.

User Expectations and the E-Book Reality

When scholars disseminated their ideas primarily through print, physical access and discovery were considerably challenging. In this environment, even the earliest, clumsiest iterations of electronic search and access were revolutionary, and users' information-seeking paths included either learning the intricacies of the few systems available or turning to a librarian for advice or mediation. Scarcity made even rudimentary electronic access valuable; any search method more efficient than paging through paper indexes was worth investing the time to master.

Today users are more likely to complain about finding too much information than not enough; we have come a long way from the finicky spearfishing of DIALOG to the massive trawl of Google. Once the prospect of watching a movie without leaving your home was an unthinkable luxury; now subscribers spend half the evening scrolling through their Netflix queues, paralyzed by choice. When it comes to accessing

information, scarcity is no longer as compelling as convenience. Entire business models are built on the delivery of content, rather than on the content itself. It is not enough to offer access; a physical video rental shop with twice the inventory of Netflix is unlikely to siphon away many customers.

Libraries have failed to keep pace with their users' technical expectations. By 2000, online access to full text journal articles was in and of itself impressive, a vast improvement over combing through physical indexes; now it is taken for granted. Universities would not expect to delight and astonish a new undergraduate with the prospect of being able to find and read an article without visiting the library. Yet libraries offer thousands of e-books via deeply flawed aggregator platforms as if users will put up with these inconveniences for the now-everyday experience of reading the text on a screen.

Users accustomed to purchasing e-books from Amazon and reading them on their iPads bring the expectations of that experience to library e-books. Once users buy an Amazon e-book, they can read it on any device with the Kindle app – an app available for nearly all devices and with a installation process already familiar from installing dozens of other apps. After buying the Amazon e-book with a single click, the user can highlight, annotate, and customize the text display, and can easily send the book to other devices. Aggregator e-book platforms seldom meet a single one of these expectations (although publisher platforms often do).

A user attempting to check out an e-book through an academic library will likely first be required to download software, usually either Adobe Digital Editions or something similarly specialized and proprietary, and then create one or two accounts separate from the institutional account with which he has already authenticated. Once he has jumped through several minutes' worth of hoops (even a best-case scenario, in which the user already has software and accounts squared away, takes longer than a minute – a small eternity in Internet time), the features he expected to find may or may not be available. Printing, highlighting, and copying are seldom available in any consistent, predictable fashion. If the user is allowed to transfer the book to additional devices, the process is convoluted and multi-step, nothing like the seamless Amazon experience. A user who masters the complexities of downloading one e-book will

quickly discover that the thicket of rules varies by publisher, platform, and even by title – and that e-books downloaded via an academic library do not have any value-added features that make the long, complicated download process worthwhile.

This is not to say that e-books marketed to end users are trouble-free; famously, Amazon retroactively removed purchased copies of *1984* from customers' Kindles (Stone, 2009) and the Kindle edition of J. K. Rowling's *The Casual Vacancy* was initially unreadable (Owen, 2012). Such incidents are, however, acknowledged problems, and users who encounter them can expect a refund or a solution when they complain. The problems plaguing aggregator e-book platforms exist largely by design and as direct consequences of the digital rights management (DRM) with which third-party provider platforms and some publishers encase their e-books.

Additionally, this is not simply a case of a product marketed to individuals being superior to one marketed to institutions. Library e-journal article platforms offer a much smoother user experience; in almost all cases, a user simply downloads a fully searchable PDF. For e-journal articles, users do not need special software or additional accounts, there are rarely user limits, and downloaded articles can be read on any device. A heavy user of library e-journal platforms brings these expectations to library e-book platforms. For instance, instructors accustomed to pointing their students to online journal articles sometimes assign e-books as course readings without noticing that the e-books in question are limited to one user at a time. Even an instructor who notices the user limit on the book is unlikely to realize that it allows one user to lock the rest of the class out of the book for two weeks at a time. No other online resource behaves like this.

Even users who are not well-versed in the use of online journal articles or non-library e-books find library platforms disappointing. In Berg, Hofmann, and Dawson's study (2010, p. 522) of undergraduates' interactions with e-books, "Participants articulated a set of expectations for e-books, even though few of them had extensive experience with the format." Instead, they expected e-books to follow the same general conventions of websites, easily searchable and thoroughly cross-referenced with hyperlinks, like Google Books. Participants complained that chapter titles and page numbers in library e-books were "not clickable" and expressed frustration with the

search functionality. Furthermore, in a study of undergraduate preferences for electronic or print textbooks, Woody, Daniel, and Baker (2010, p. 947) found that "previous experience with e-books does not increase preference for e-books." Glackin, Rodenhiser, and Herzog's study (2014) of students accessing e-books on mobile devices found that the primary complaint participants had about e-books was usability, followed by functionality, with specific complaints about the inability to highlight content. Although participants in Glackin's study were generally more positive about their e-book experiences, they were also having those experiences on mobile devices given to them by their university.

Even without the solicitation of a formal study, our users communicate their frustrations to University of Connecticut (UConn) librarians. When users receive rejected interlibrary loan requests for books available locally in electronic format, they sometimes reply that the e-book version is unsuited to their needs, often because the e-book prohibits copying lines of text or printing even a handful of pages. For scholars seeking to engage with a text, such restrictions are seldom acceptable. As Schomisch, Zens, and Mayr (2013, p. 389) put it, "'Read only' appears insufficient in a scholarly context; additional features for printing, marking, annotating, and excerpting are crucial for textual work in academia." Librarians also routinely field questions from users who want a print copy of an e-book, particularly tech-related titles such as programming textbooks. For these users, the prospect of flipping between tabs or browser windows while completing exercises on a computer is less appealing than having a book open beside the computer screen; in cases where printing is disallowed or severely restricted, the e-book is deemed too inconvenient to be useful. Additionally, some e-books are missing images, tables, graphs, and even sections of text, either because of formatting difficulties or because publishers lack the rights to include them; in either case, their absence diminishes the usefulness of the book. For many users, the e-books that libraries offer simply are not acceptable substitutes for print books, let alone the feature-rich, value-added improvements they have the potential to be. Frustrated users would probably be appeased with the ability to print the e-book in whole or in part, but very few of platforms allow this. A user who has just printed eighty pages' worth of journal articles without incident suddenly discovers that a ten-page e-book chapter is off-limits, a

realization that is likely to dawn only after the user has downloaded software, signed up for an account, and jumped through a series of hoops.

The DRM protections attached to many e-books resemble those of earlier generations of other electronic products and are quite unlike anything a tech-savvy user would expect – and are completely overwhelming to those uncomfortable with technology. As most other industries are coming to acknowledge, onerous DRM discourages use of the legitimate purchased product in favor of the more convenient pirated product and, under the right conditions, eliminating DRM restrictions increases sales (Vernik, Purohit, & Desai, 2011, p. 1022). Reasonably unobtrusive DRM that adds value in some way has proven more popular with consumers; for example, end-user-marketed e-books that use DRM in exchange for personalized features can give users the ability to store their library virtually and remember the point at which they left off reading across multiple devices. The nature of temporary library checkouts does not allow this sort of per-user long-term personalization, so librarians can offer users only the irritating parts of DRM with none of the benefits.

By and large, publishers created e-books to mimic physical books and thus try to treat them the same way. Platforms are saddled with analogues such as "checking out" items that are inherently not finite. Anyone who has ever explained to an irritated user that an e-book cannot be viewed online because someone else has "checked it out" is likely aware of how absurd this sounds. The current model for electronic resources familiar to most users is one in which any number of users can view the resources simultaneously, and access may be limited by geography (such as when YouTube videos are restricted to certain countries' IP ranges) or to paying customers (such as paying a monthly fee for Netflix). With each new wave of undergraduates, users increasingly bring with them expectations formed in this digital world.

In spring 2014, librarians at UConn conducted a series of interviews with undergraduates, asking them to walk through the process of their research for a recent assignment. Use of multiple devices was common; students routinely accessed articles they had found from personal laptops, library workstations, and tablets. One senior's workflow involved searching for and downloading articles on her laptop, reading and highlighting articles on her iPad, and then printing relevant pages from library

workstations so they would be handy while she wrote. She had never used library-offered e-books in her research and likely would have been profoundly frustrated had she tried. Another student became so frustrated trying to find and access e-books through the catalog that he settled for reading only the preview pages available on Google Books. Another student explained that she has no preference for print or electronic when she reads, but her instructor required a physical book for the assignment (although very few of our faculty direct students to print journals over e-journals, requiring print books and forbidding e-books is still somewhat common). All of the students interviewed made extensive use of online journal articles; several of them used print books; none of them used library e-books successfully.

Librarians might ask why any patrons put up with dysfunctional e-book platforms, and why use e-books show substantial use statistics despite all the impediments. The most likely explanation is that users cannot afford to purchase expensive academic e-books individually. Patrons dissatisfied with the library's streaming video options can try YouTube, Netflix, Hulu, and other low-cost services; users dissatisfied with library study spaces can go elsewhere on campus. "Never mind, I'll just buy it" is a frequent remark heard at the reference desk when it becomes clear that an affordable commercial alternative exists to a sufficiently inconvenient library offering. Users dissatisfied with library e-books are limited to looking for a print alternative (which many do), paying steep prices for individual access with fewer restrictions to the content, or attempting to make the best of a bad situation. Hoping that users will be desperate enough to put up with frustrating products is not fair, appropriate, or a winning strategy for academic libraries. Worse, offering substandard access through the library puts lower-income students, who already face a digital divide from their peers, at an even greater disadvantage from those able to afford a functional alternative (Hargittai, 2010, p. 108).

Academic libraries can offer better access to e-books, just as they already do for online journal articles; even streaming video options are improving. There is nothing inherent to e-books that precludes a better user experience. As Norman (2010, p. 8) puts it in *Living with Complexity*, "The major cause of complicated, confusing, frustrating systems is not complexity: It is poor design."

It is past time that librarians stop accepting poorly designed e-book platforms and start offering users better access, while at the same time working within finite budgets and paying only for what our user communities need for their learning, teaching, and research. Although many libraries develop patron-driven acquisitions or demand-driven acquisitions profiles to acquire only those e-books that their patrons use, academic libraries still need to work with e-book publishers and providers to create models that also meet users' access expectations. UConn Libraries is attempting to do so by working with publishers to create "Evidence Based Selection of E-Books" programs.

UConn Libraries and Patron-Driven Acquisition of E-Books

Between July 2011 and August 2014, UConn Libraries had patron-driven acquisition (PDA) e-book profiles with EBL and ebrary. Although librarians adjusted the profiles throughout this period, the most recent and long-standing settings were from February 2012 through August 2014:

- Books over \$100 for EBL,
- Books up to \$99.99 for ebrary,
- Imprints from three years ago to present,
- Textbooks excluded, and
- Three short term loans (STLs), with the fourth use triggering a purchase.

In one sense, UConn Libraries' PDA program was successful in that numerous e-books were available to users, some of which were only available as individual titles via EBL and ebrary, and because use statistics suggest a demand for the content. PDA allows user discovery of content that libraries may not have purchased via other means of library-initiated collection development. Additionally, "in many cases, user selections have, not surprisingly, been ahead of the librarian selections because the users are the ones doing research, working in labs, conducting fieldwork, and studying the latest disciplinary trends....Individual readers know what is in their own interest better than librarians do" (Dillon, 2011, p. 193).

Additionally, PDA meant paying only for content that patrons used, which, from an acquisitions perspective, was PDA's primary benefit. For example, although patrons

had access to approximately 50,000 e-books accessible via UConn Libraries' EBL profile from July 2011 through January 2013, they used just under 3,000 unique e-book titles. Use triggered 4,597 short term loans; patrons used only 100 e-books enough to trigger purchases. If all 2,894 titles used had been purchased outright, they would have cost more than \$450,000. Instead, UConn Libraries spent just over \$100,000 for 4,579 short term loans and 100 purchases.

However, the user experience for PDA e-books was less than ideal. In addition to a faculty member wondering "why is the library buying things that are nearly impossible to use," (user comment [name removed for privacy], personal communication, March 12, 2013), patrons placed interlibrary loan requests despite e-book availability. When asked about why an interlibrary loan request was placed for a book with online access, one user indicated via an e-mail correspondence that it was not easy to capture the minimal text needed for a citation; typing quotes from a print text would be easier (personal communication [name removed for privacy], September 10, 2014). Specific feedback from one faculty member indicated that he preferred e-book access directly via the publisher's platform because of the better user experience:

Thanks very much for these links. However, I must share my feedback that this e-reader format is quite possibly the worst publication format that I have yet come across. In printing off the full chapters I wanted, some suddenly were truncated and every one had many page duplications, probably a result of subsections being defined part way through the page. I'm sure that this affected the number of pages I was allowed to print off too.

The normal SpringerLink format would have been a thousand times better. I take what I can get, of course. (J. Klassen, personal communication, February 21, 2014).

It should be noted that, although UConn Libraries did not proactively and systematically conduct usability tests of EBL and ebrary platforms, librarians received over 110 technical support requests for e-book access between December 2013 and

November 2014. Anecdotal comments such as those above were frequent enough – at least once a week – to warrant posting extensive how-to guides on accessing and using e-books. Yet low use statistics of the e-book guides suggest that patrons did not use these guides regularly. Perhaps this is because “in the current environment, most people do not have time to spend searching for information or learning how to use a new information source or access method. In order to be one of the first choices for information, library systems and interfaces need to look familiar to people by resembling popular Web interfaces, and library services need to be easily accessible and require little or no training to use” (Connaway, Dickey, & Radford, 2011, p. 188).

What is convenient and familiar to academic library users is the one-click download of an e-journal article – an access experience that is far less complicated than e-book access via DRM-restricted aggregator platforms such as EBL, ebrary, and EBSCO.

In addition to the less-than-ideal user experience of DRM-encased PDA e-books, UConn librarians encountered poor profile integrity in which there was use, and over \$30,000 in charges, for content that was not supposed to be in the EBL PDA profile. Although librarians can report PDA profile integrity issues or e-book functionality and missing content problems to vendors, the bottom line is that the vendors should deliver what the libraries paid for. However, with the volume of online content increasing and the number of staff managing online content remaining flat or decreasing, it is harder to track, report, and monitor e-books for such issues.

Adobe’s unencrypted collection of e-book user data also caused great concern. In October 2014, Nate Hoffelder (2014) wrote on *The Digital Reader* blog that Adobe Digital Editions 4 gathers “data on the e-books that have been opened, which pages were read, and in what order. All of this data, including the title, publisher, and other metadata for the book is being sent to Adobe’s server.” According to Hoffelder, “Adobe is not only logging what users are doing, they’re also sending those logs to their servers in such a way that anyone running one of the servers in between can listen in and know everything.” For people using Adobe Digital Editions on an e-reader, Adobe is scanning and gathering metadata for all e-books on the device, not just for the e-books opened in Adobe Digital Editions 4, but also all Epub e-books and e-books stored in calibre.

Profile integrity issues coupled with such an egregious breach of privacy when accessing and using UConn Libraries' e-books culminated in discontinuing the EBL and ebrary PDA programs in October 2014.

Let's Fix It

How can libraries capture the acquisitions benefit of PDA but make e-book access and use a pleasant, easy, and confidential experience for users?

Knowing what users need, UConn librarians strive for DRM-free, unlimited simultaneous, e-journal article-like, and title-by-title access to e-books, while only paying for what the scholarly community needs. With continuing flat or reduced budgets and increased need to justify spend, librarians can neither afford nor justify buying packages of e-books to access select titles.

Analysis of UConn's EBL PDA use data showed that of the 294 publishers with titles that patrons used, 75% of the funds were spent for e-books from just seven publishers. ebrary PDA use data showed that of the 492 publishers with use, 48% of the funds were spent for books from seven publishers, many of them the same as the EBL high-use publishers.

Such data became the germ for an idea: UConn Libraries pays a small deposit to an e-book publisher for 12 months of access to all their DRM-free e-books via the publisher's platform. At the end of the 12 months, a predetermined amount spent would be applied to the perpetual access purchase of those e-books with the highest use and that best matched the university's curricular needs. The goal of this "Evidence-Based Selection of E-Books" (EBS) model would be to purchase DRM-free, in-demand e-books with access analogous to e-journal articles. Depending on the publisher, the guaranteed amount spent may be similar to an e-book package price and would help show that title-by-title purchasing is a viable and needed model.

Thus, in fall 2012 UConn librarians began talks with select publishers about a trial to explore this new model of acquiring e-books. As conversations occurred, it became clear that – regardless of the term used to describe the model – publishers (e.g. Elsevier and Wiley) were also beginning to offer alternatives to publisher-provided e-book packages and aggregate PDA programs.

By November 2014, UConn Libraries had active EBS e-book pilots with Wiley (Wiley's Usage Based Collection Management Model), Taylor & Francis, and Digitalia. Librarians also set-up a similar model for Gale's Archives Unbound primary source collections. Elsevier and Sage also offer variations on EBS e-book programs and Alexander Street Press offers an evidence based acquisitions model for their streaming video collections.

Evidence Based Selection of E-Books: Benefits & Challenges

Based on UConn's experience thus far with evidence-based selection of e-books, there are notable advantages, including DRM-free e-book access similar to, and integrated with, e-journal access for similar publisher content. Additionally, the data gathered during the access year can be applied not only to purchase decisions at the end of the 12-month period, but can also be used to make data-informed collection allocations for the following year or as hard evidence when submitting funding requests. Although it is not yet known whether EBS will also result in higher use of e-journal content on publisher platforms, there is reason to be optimistic given cross linking and integrated search on some publisher sites.

However, there are down sides to such models. Not all e-books are available directly from the publisher, nor do all publishers have their own website for accessing their e-books. For example, librarians found that an undetermined number of Wiley e-books are only available as separate purchases (e.g., Wiley reference titles) or via aggregator platforms such as EBL and ebrary, rather than as part of the evidence-based selection of e-books pilot via Wiley Online. Thus EBS is not an all-encompassing solution for academic libraries to provide e-book access to their communities, but it is one of many approaches to collecting e-books.

Additionally, the disappearance of those e-books which a library decides not purchase after a set amount of time will likely frustrate users, though the case of disappearing e-book access seems to be unfortunately commonplace regardless of platform and acquisition model.

Another downside of evidence-based selection of e-books is that DRM enables most PDA profiles to use technology in an attempt to differentiate between "real" and

“casual” use so that no use is triggered for views of the front or back matter or for less than 15 minutes of browsing; longer use of core content, printing, and downloading all trigger use. Use reports of non-DRM e-books show raw downloads only; there is no way of knowing from COUNTER reports how a patron used a downloaded book.

A further challenge of evidence-based selection models is that they add yet another multi-layered and unique e-resource management workflow to an acquisitions “aquarium” that is already quite full of exotic fish in need of ongoing, careful care. However, when a model helps provide unfettered access to needed information that it is librarians’ responsibility to provide, allocating the resources to implement and monitor it is a far better use of a library’s staff time than activities such as constantly troubleshooting lost e-book access, developing user guides for unintuitive and hard-to-use e-book platforms, monitoring the profile integrity of a PDA profile, or ordering print copies of a book when it is discovered the key diagrams, images, and tables are not available in the electronic edition.

Recommendations

When developing a plan for evidence-based selection of e-books, the following points may be helpful in determining which publishers to approach and in estimating budget allocations per publisher:

1. When available, analysis of aggregator PDA reports for spending and use by publisher.
2. COUNTER turnaway and denied-access/unlicensed content reports.
3. Publisher e-book price lists (title by title and packages).
4. Faculty feedback and requests for e-book access via publisher platforms.
5. Library-owned e-book title lists by publisher to help prioritize which publishers to approach about an evidence-based selection program and to avoid duplicate e-book purchases.

Models for evidence-based selection of e-books are just one means of providing access to e-books and addressing the issues of user experience and paying only for what is in demand and used by an academic community.

Conclusion

Academic librarians need to know their users' expectations for accessing information and what users do with that information; this understanding is vital to informing not only what collections to acquire, but also the access methods. Additionally, with continued strains on library collection budgets and calls for justifying spending, data-rich models for acquiring e-books should be the norm. Academic libraries are well positioned to shape collection models. Librarians need not wait to see what information providers offer to them; instead they should proactively propose models to publishers that work from financial, user experience/expectation, and information access perspectives, such as buying only DRM-free e-books and adopting evidence-based selection models to buy only what is used..

Although developing new models of e-book acquisition and access is slow and time-consuming, it is important to acknowledge, celebrate, and continuously evaluate the effectiveness of small changes so that library resources are both relevant *and* accessible. With the multitude of platforms, interfaces, and devices that are now part of the information access equation, it is fundamentally unacceptable for libraries to provide relevant information to their academic communities without also making sure that the user experience accessing those collections meets or exceeds the users' expectations. Library collections become irrelevant if users cannot easily access them.

Just as the academy is responsible for supporting freedom of speech, so too is the academic library responsible for mitigating the impediments so that there is also freedom of access. When libraries purchase content encased in poor interfaces and behind artificial barriers, it is a form of censorship -- a situation that the library community should challenge in the "fulfillment of [our] responsibility to provide information and enlightenment" (American Library Association, 1939). As the primary buyers of academic publishers' content, academic libraries are uniquely situated to effect change in the way that scholarly content is packaged and delivered. Librarians have a duty to advocate for what users need, to practice good fiscal stewardship, and to refuse to support business models that deliver substandard access at unreasonable costs. Let's explore creative options for access to scholarly material such as e-books,

refuse to support broken business models, and advocate for something better.

Appendix A: Author's Note

At the editors' request, the following text was omitted from the final publication.

In response to these larger issues in academic publishing, various other initiatives already exist in an attempt to radically shift the paradigm. A selection of such initiatives that academic libraries should explore and share with their scholarly communities follows:

Knowledge Unlatched

Libraries collaborating to “create a sustainable route to Open Access for scholarly books *and* secure long-term cost savings for their own institutions by sharing the costs of making [humanities and social science] monographs available on a Creative Commons license.”

<http://www.knowledgeunlatched.org/>

Open Library of the Humanities

“A project exploring a PLOS-style model for the humanities and social sciences.”

<https://www.openlibhums.org/2014/07/02/monograph-publishing-pilot/>

Ubiquity Press

“Ubiquity Press is an open access publisher of peer-reviewed, academic journals, [and books]. Our flexible publishing model makes journals and books affordable, and enables researchers around the world to find and access the information they need, without barriers.”

<http://www.ubiquitypress.com/>

Gluejar

An initiative “dedicated to helping authors and publishers sustainably release free ebooks under Creative Commons licenses” and “working with libraries help readers connect with books and their creators.”

<http://www.gluejar.com/>

Directory of Open Access Books

A discovery tool for open access books available from academic publishers, this “directory is open to all publishers who publish academic, peer reviewed books in Open Access and should contain as many books as possible, provided that these publications are in Open Access and meet academic standards.”

<http://www.doabooks.org/>

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